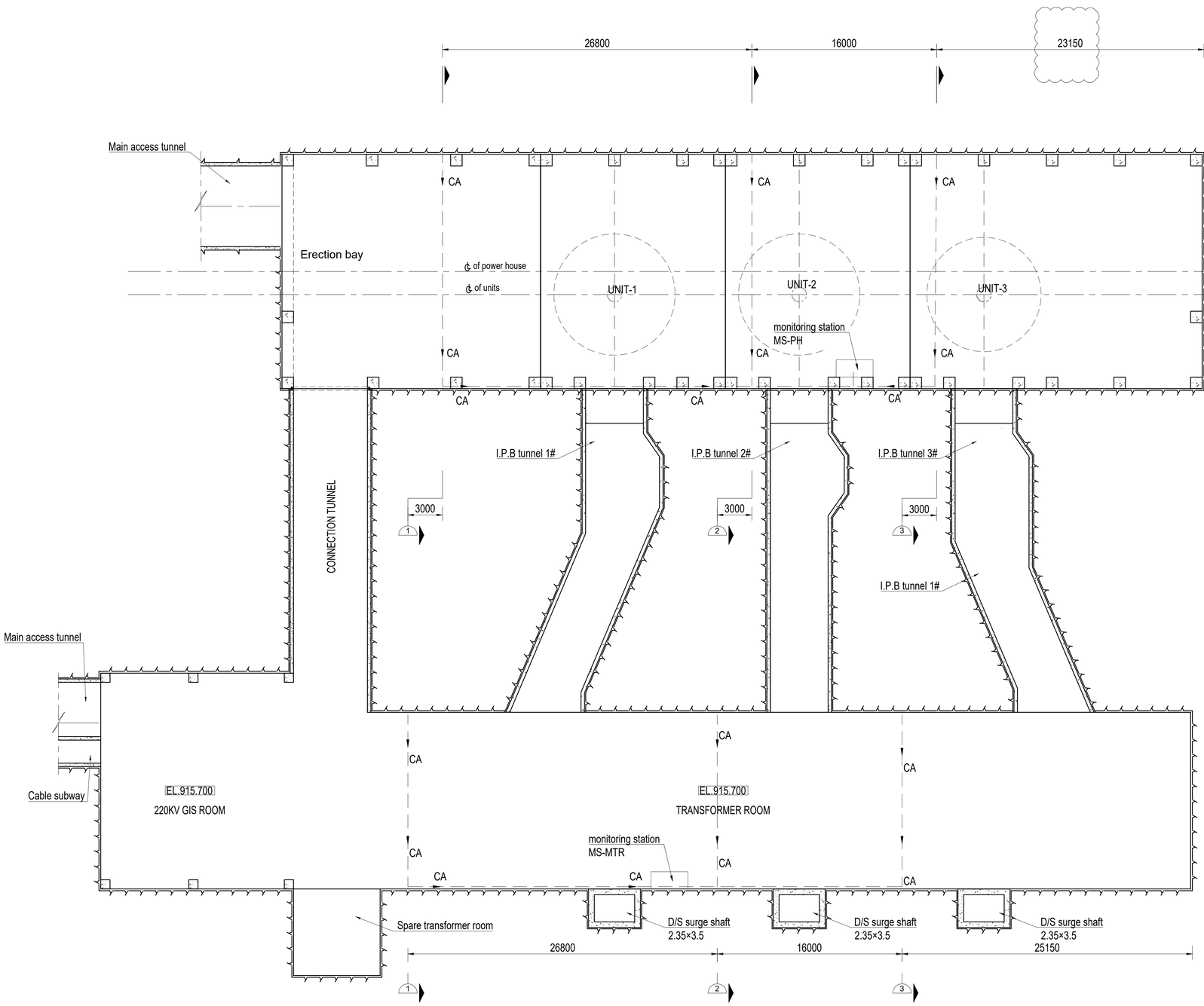
MONITORING LAYOUT DRAWING OF UNDERGROUND POWERHOUSE AND TRANSFORMER CAVERN

SCALE:1:200



NOTE

1. All dimensions are in millimeters, and coordinates, chainage and elevation are in meters unless otherwise stated in the drawing.
2. Layout of Underground powerhouse and Transformer cavern is subject to the drawing UT1-C-300-CVL-DG-60001.
3. Multi-point extensometer is applied to monitor deep deformation of rock mass,sections are selected as shown on the drawing.The schematic diagram and relevant technical requirements of Multi-point extensometer is shown in drawing UT1-C-845-CVL-DG-70011.
4. Technical requirements of convergence monitoring, please refer to UT1-C-845-CVL-DG-70006.
5. Besides deep deformation & convergence measurement, other monitoring items can be carried out as per actual conditions and request of Employer or onsite OE during construction.
6. All cables are protected by steel pipes.Attention shall be paid to prevent cables from being damaged during construction.
7. The monitoring station of Underground powerhouse and Transformer cavern is arranged at generator floor at EL.915.70m

REFERENCE DRAWINGS

UT1-C-845-CVL-DG-70011	Monitoring Layout Drawing of Desander Basin
UT1-C-300-CVL-DG-60001	Arrangement Drawing of Underground Powerhouse and Transformer Cavern

SYMBOL AND LEGEND

FOR APPROVAL

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REV. NO.	DATE	DESCRIPTION	DRAWN	CHKD.	APPD.
0A	30.MAY.2022	FIRST ISSUE	CUI J.W.	YUAN Q.S.	LI W.G. CHEN S.L.

PROJECT TITLE

Upper Trishuli-1 HEP (216MW)

OWNER

NWEDC NEPAL WATER AND ENERGY DEVELOPMENT CO. PVT. LTD.

OWNER'S ENGINEER

TRACTEBEL ENGIE jade CONSULT

CONTRACTOR

DOOSAN Enerbility

DRAWING TITLE

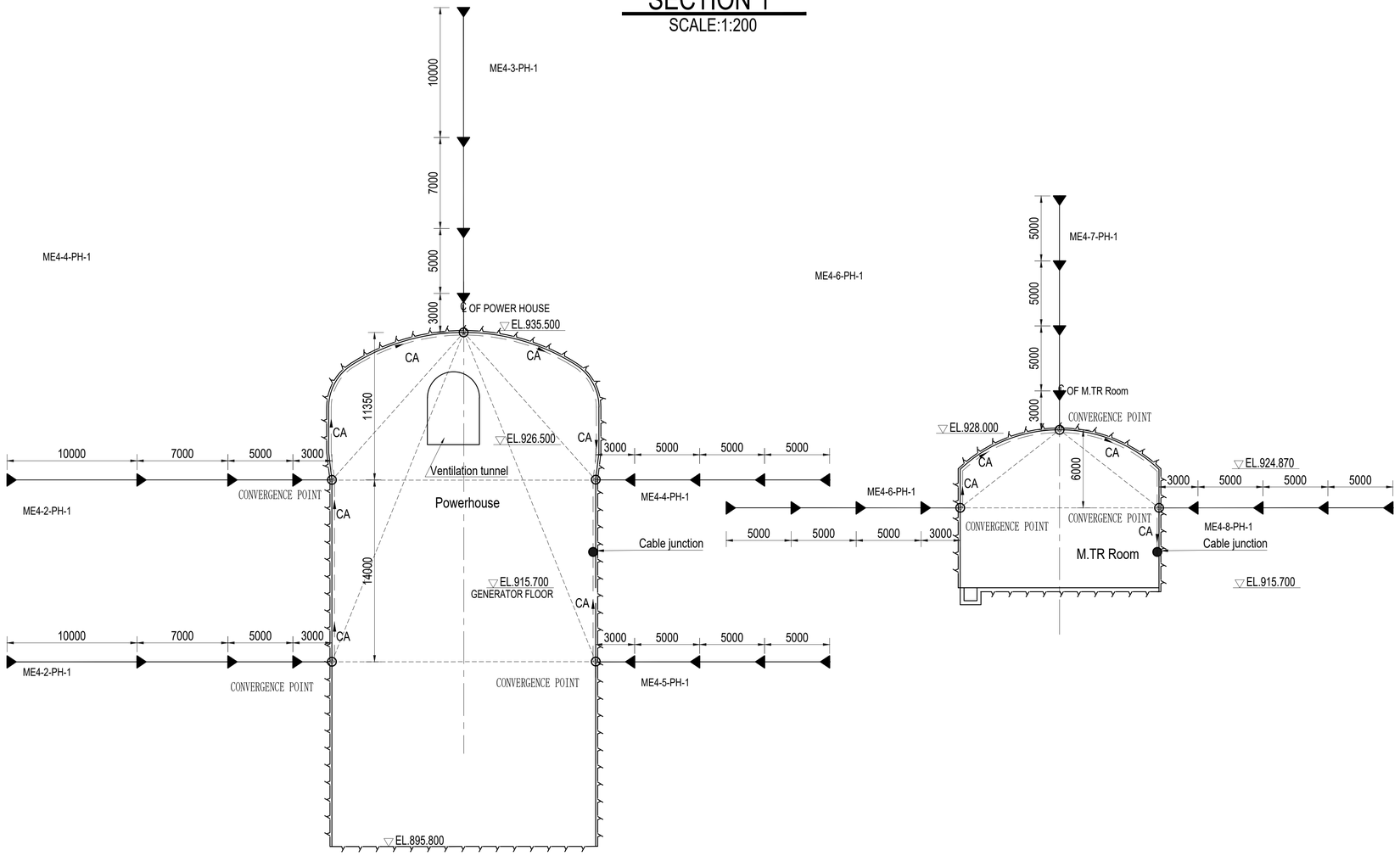
Monitoring Layout Drawing of Underground Powerhouse and Transformer Cavern

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-845-CVL-DG-70002- 1	1 OF 3	0A

A1 (594 x 841 MM)

SECTION 1

SCALE:1:200



OBSERVATION INSTRUMENT EQUIPMENT LIST

NO.	NAME	LEGEND	SYMBOL	QUANTITY	UNIT	REMARK
1	Multi-point extensometer		ME4	22	SET	Vibrating wire displacement transducer,Range 100mm,Resolution0.025%F.S..Including sensor, connecting rod, rod protection tube, anchor head, partition plate, instrument base and other orifice devices.
2	Hole for rock Multi-point extensometer			523	m	Borehole diameter Ø110mm, single hole depth 26m or 19m,including backfill grouting.
3	Cable for vibrating wire type		CA	1080	m	10 core, galvanized copper wire.
7	Convergent measuring point				set	The number of measuring points shall be calculated according to the monitoring section
8	Hub box		B	5	set	Allow access to 20 instruments,Protect with a homemade protective box.
9	Cable protection tube			460	m	50mm diameter galvanized steel pipe with wall thickness greater than 2.5mm.

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2. Other see sheet 1.

REFERENCE DRAWINGS

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DRAWING TITLE

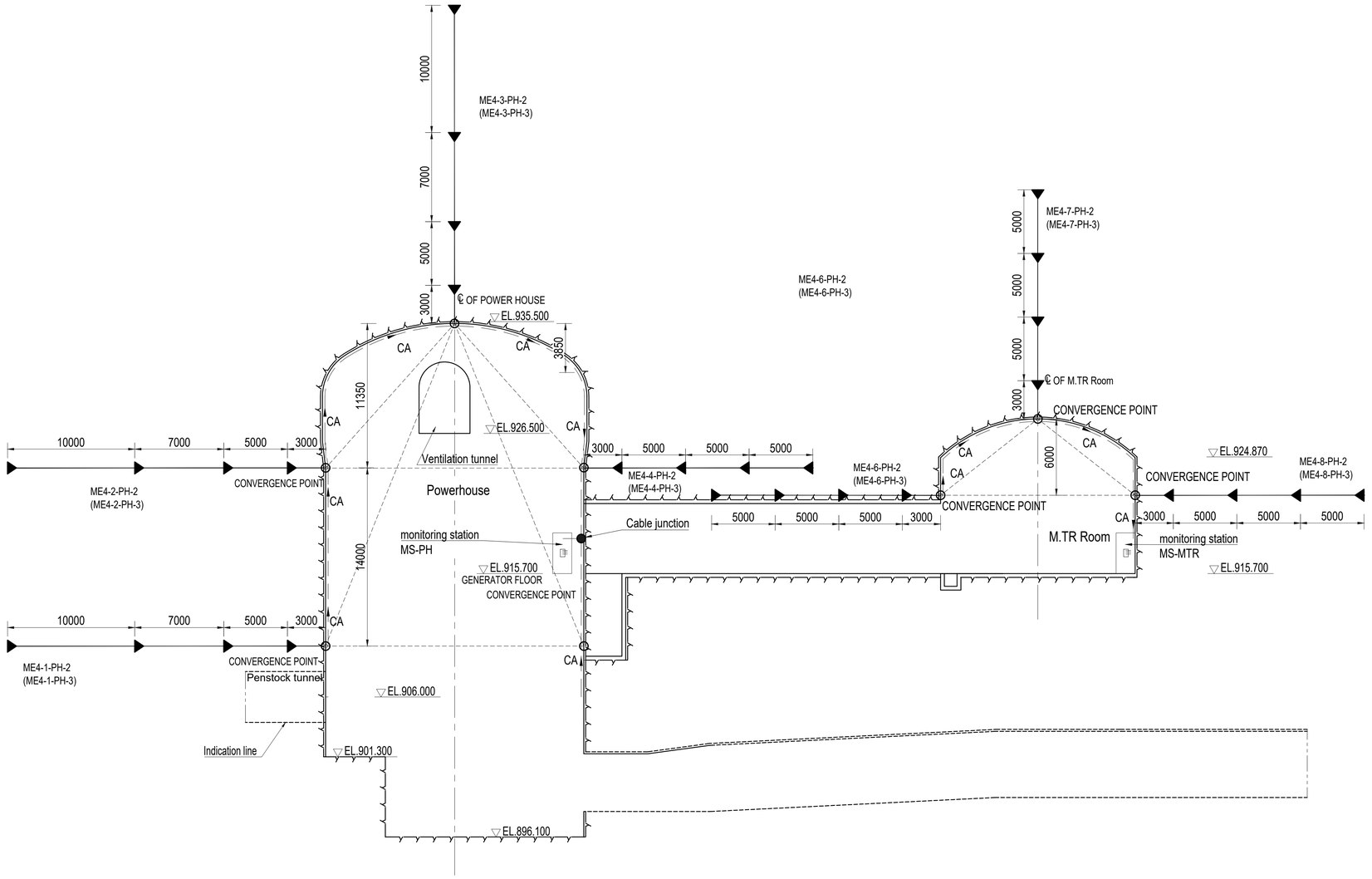
Monitoring Layout Drawing of Underground Powerhouse and Transformer Cavern

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-845-CVL-DG-70002- 2	2 OF 3	0A

A1 (594 x 841 MM)

SECTION 2(3)

SCALE:1:200



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REFERENCE DRAWINGS

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SYMBOL AND LEGEND

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Monitoring Layout Drawing of Underground Powerhouse and Transformer Cavern

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-845-CVL-DG-70002- 3	3 OF 3	0A

A1 (594 x 841 MM)